



CARDWELL
COLLABORATIVE

The Medical Center of the Americas Foundation



Agenda...

A walk through our story

- The Need
- Development of a regional vision for Economic Development
- Eds & Meds.... all in
- Medical Center of the Americas

The Need

- Geographic isolation
- 3 states = 3 major cities are the “red-headed step children” of the states
- 2 countries = international boundary
- Low skill / low wage manufacturing emphasis for 50 years
- Flight of manufacturing to China, etc. in the 80s & 90s
- Medically underserved rural communities / very difficult to recruit medical professionals



El Paso was in an Innovation Drought for many years

...lacking the inputs to create fertile ground for entrepreneurship.



WORKFORCE

Bottom 10 MSA for tech workforce density (The Density of Innovation) & #1 US exporter of youth (Bloomberg)



ENTREPRENEURS

40% of national average for new tech business creation (TechStarts)



FUNDING

Texas ETF & Local Angel Network dis-banded



ACCELERATION

No technology incubators or accelerators to support start-ups



INNOVATIONS

Universities conducting basic research; unfriendly tech-transfer policies



REPUTATION

Juarez violence, loss of publicly traded companies, lacking quality-of-life amenities

Act Regionally to Compete Globally



**El Paso,
Texas**



Las Cruces, NM



**Juarez,
Mexico**

Development of a Regional Vision



- Tourism
- Military (Ft. Bliss) → Defense; Aerospace
- International Trade (border w/ Mexico) → Manufacturing; Trade
- **Healthcare**
 - **Improves health**
 - **Contributes to improved “quality of life” essential for recruiting business, professionals**
 - **Stable / good paying jobs all along the professional spectrum**
 - **Many “related” industries (e.g., Health IT, biomedical innovation, medical manufacturing)**
 - **Tremendous education and research requirements**

2000

TTUHSC - 2 year Lubbock program
Since 1973

UTEP – historical focus on engineering,
geological sciences, etc.

Tenet & HCA Hospitals, status quo
County hospital on the verge of closing

NMSU land grant university

3,000 daily users of **MCA Medical
Campus**

MCA Foundation non-existent

2018

TTUHSC El Paso

- independent university status + \$180M new buildings
- 4-year medical school; nursing school; graduate school of biomedical sciences; residents/fellows, upcoming dental school
- new private academic teaching hospital with Tenet

UTEP:

- New buildings (\$270MM): biological sciences, chemistry/computer science, nursing/health sciences, bio-engineering, interdisciplinary research building
- New programs: pharmacy, nursing

3 Hospital renovations, including county hospital

6 New Hospitals:

- 1 private academic teaching hospital
- 1 private non-profit children's hospital
- 2 private hospitals in Juarez, Mexico
- 1 DOD army hospital

Added a private **Osteopathic Medical University**

10,000 daily users of **MCA Medical Campus** (MCA Campus Master Plan, phase I, II & III + SmartCode + TIRZ + incentive zone + utility & traffic plan)

MCA Today

- \$35MM in assets; \$5MM annual operating budget
- Cardwell Collaborative biomedical incubator + Innovation Center

Healthcare is largest private industry!

TTUHSC El Paso

- \$180 million in new buildings from **2004 to Present**
- Annual Research Expenditures have grown from:
 - \$5 million in 2004 → \$16 million in 2017
- 2,000+ employees
 - Salaries < \$200,000 → 100+ employees
 - Salaries \$100,000 - \$199,999 → 175+ employees
 - Salaries \$50,000-99,999 → ~700 employees
- More than 800 students (Hispanics = 23% Medical; 68% Nursing)
- \$270 million = annual budget
- \$223 million = regional economic impact for 2015
- \$60-90 million = est. new Dental School economic impact annually
- Leadership donations in the amounts of \$50 million (medical school); \$10 million (nursing school); \$11 million (nursing school); \$25 million (dental school)



Medical Education Building



Nursing School & Simulation Labs



Upcoming Research Building



Clinics

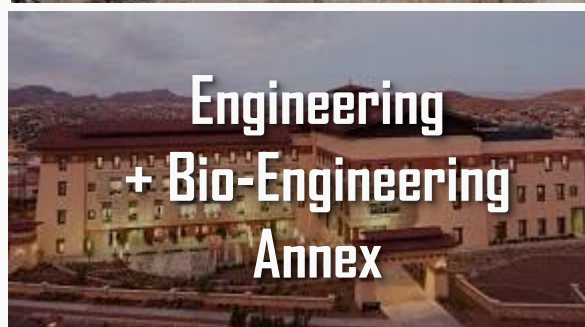


Medical Sciences Building



University of Texas at El Paso

- \$270 million in new buildings from **2009 to present**
- Annual Research Expenditures have grown from
 - \$30 million in 2010 →
 - \$95 million in 2017





New Mexico State University

- \$110 million in annual research in 2016
- Arrowhead Innovation Center
- **2016:** Burrell College of Osteopathic Medicine opened on the NMSU Campus – sharing services
 - \$60 million facility

Juarez Universities



University Medical Center of El Paso & El Paso Children's Hospital

2005 to Present

- \$425 million in new buildings and renovations
- Over 4,000 employees

Land Acquisition

UMC Hospital
Expansion/Renovation
Children's Hospital Tower

Outpatient
Destination
Centers

Tenet Health Systems: The Hospitals of Providence

- Over \$550 million in new buildings and renovations over a 10 year period
 - 2 new hospitals (one is an academic teaching hospital with TTUHSC), plus a micro-hospital
 - 2 major hospital renovations
 - 2 Off-Campus Emergency Departments
 - Urgent Care Centers and Imaging Centers
- Over 4,000 employees



William Beaumont Army Medical Center @ Ft. Bliss – *coming Spring 2020*

- \$1 billion replacement hospital
- 1.13M sf
- 272 acres
- LEED Silver
- 6 buildings
 - Hospital
 - East Clinic
 - West Clinic
 - Admin, CIB, CUP
 - Helipad



VA Healthcare

- Serves SW Texas and Doña Ana County, NM
 - Main facility at WBAMC
 - Community Based Outpatient Clinics (COBCs)
 - Las Cruces, NM
 - East El Paso
- COBC expansions expected soon:
 - Central El Paso
 - West El Paso
 - East El Paso



6 Regional Entrepreneur Support Venues

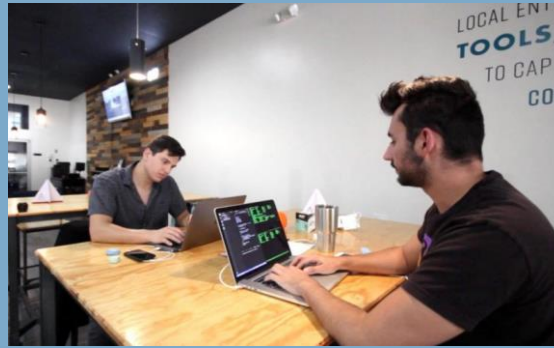
El Paso



MCA's Cardwell Collaborative
(wet-labs, dry-labs, office incubator, data center, collaboration spaces, programs)



HUB of Human Innovation
(office incubator, programs, Kauffman Million Cups)



Co-Work Oasis
(downtown co-working space & speakers)



One : One
(hip downtown work space)

Juarez



Tech-Hub Juarez
(office incubator, data center, collaboration spaces, programs)

Las Cruces



Arrowhead Center at NMSU
(fund, wet-labs, office incubator, collaboration spaces, programs)



Juarez Hospitals

- Hospital Los Angeles (2006)
- Hospitales Star Medica (2008)
- Hospital de la Familia

- UACJ has had a medical, nursing and dental school in Juarez for many years





MEDICAL CENTER
OF THE AMERICAS
FOUNDATION

who we are:

Mission Statement

To develop and catalyze the **life sciences ecosystem** in the Paso del Norte region.

Vision Statement

To cultivate a dynamic **health industry and innovation / entrepreneurship ecosystem** that **competes globally.**

MCA: Creating a Medical Downtown & a Culture of Innovation



Medical Downtown

Campus master planning
Land acquisition
Cardwell Collaborative
VA Wellness Center
MCA Medical Plaza



- ✓ **Central campus**
- ✓ **Unique spaces (commercial labs)**
- ✓ **Financial sustainability**



Culture of Innovation

Innovation Center
Proof of Concept Challenge
Clinical Trials
Workforce Development
Promotion



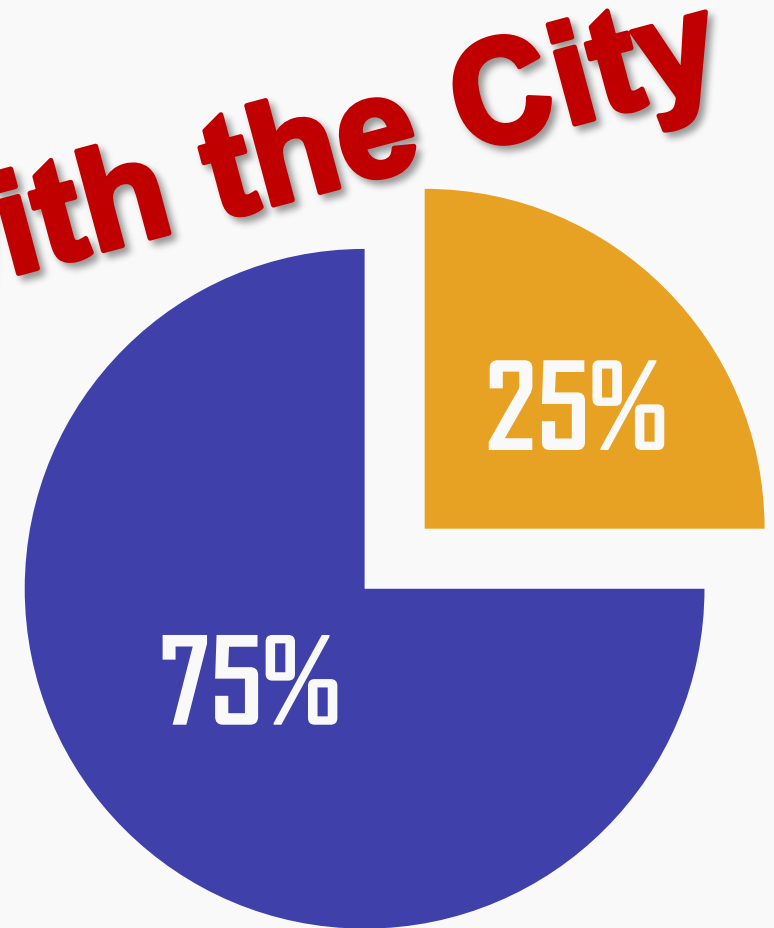
- ✓ **Economic development**
- ✓ **Job creation**
- ✓ **Industry diversification strengthening & growth**



City of El Paso Economic Program Grant Agreement

City Impact Fund POLICY – Approved June 1, 2011

- Dedicate **75%** of the annual fund to assist the **MCA Foundation** and other key stakeholders to create one or more life sciences campuses in the City of El Paso
 - Reserve the remaining portion of the fund (**25%**) for other economic development activities
- **\$2.5 million per year to the MCA**
- **18 year contract**
- **MCA also purchased 13 acres of land from the city below FMV**
- **City is waiving all permit fees for developments on the 13 acres up to \$300,000**



MCA Impact Fund Projects

"NON - BUILDING COMPONENTS"

A

BASELINE STAFFING

Complete & On-going

B

PLANNING & DESIGN

Complete & On-going

C.1

BIOTECH COMMERCIALIZATION INSTITUTE

Complete & Ongoing

C.2

CLINICAL RESEARCH ORGANIZATION

In-Progress

C.3

PROOF-OF-CONCEPT FUNDING

Complete & Ongoing

"BUILDING COMPONENTS"

D.1

LAND ACQUISITION...
+ development

Complete & on-going

F

NURSING SCHOOL BUILDING a/k/a
TTUHSC GAYLE GREVE HUNT SCHOOL
OF NURSING

Complete

\$14 million

E

MCA TECH BUILDING
a/k/a CARDWELL
COLLABORATIVE

Complete

\$28 million

D.2

PARKING

\$3+ million
Complete

NEW MCA INFRASTRUCTURE PROJECTS - Non-Impact Fund

VA Clinic

\$16 million

MCA Public Health & Medical Plaza

\$15-20 million

City of El Paso Economic Program Grant Agreement

Impact Funds to the MCA by Year (\$16.5 Million Total)

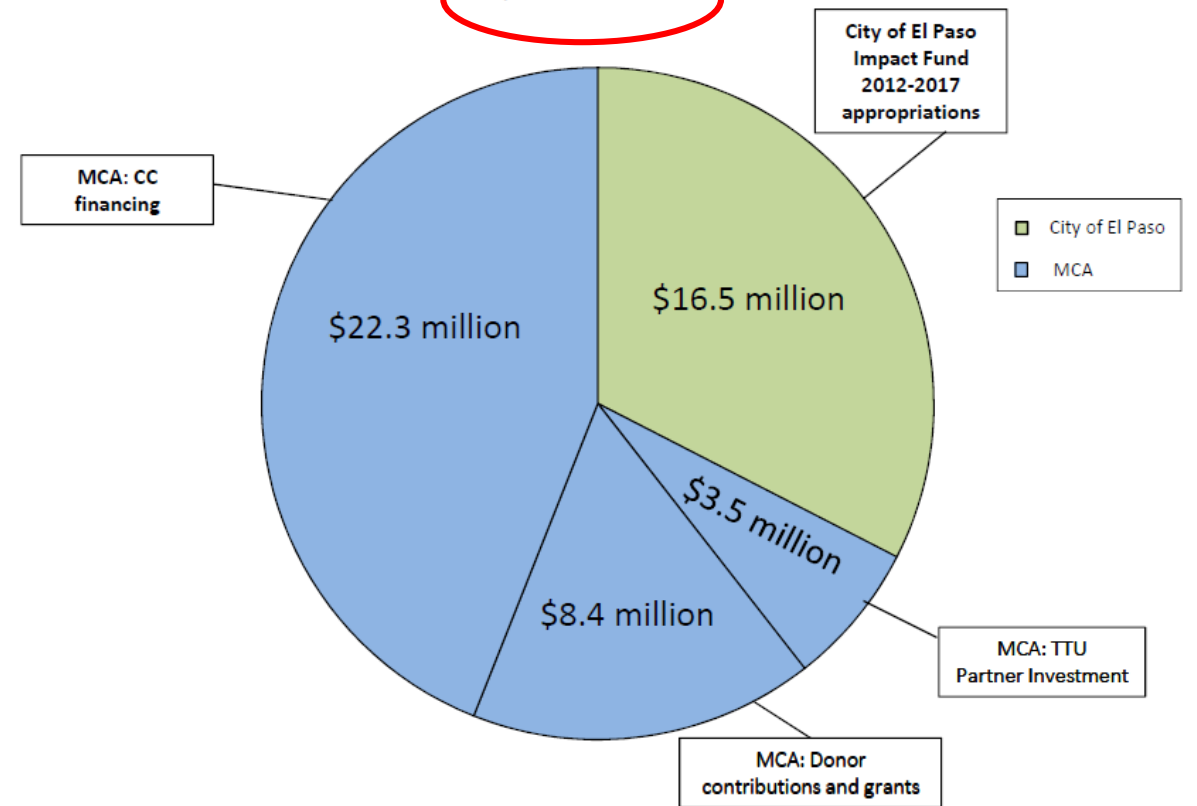
Since February 7, 2012 (Impact Fund Agreement), MCA has raised funds to leverage the Impact Funds beyond expectations:

- Grants/Philanthropy
- Credit arrangements
- Partner investment
- Other funding sources

By 2019, with VA clinic:

- **\$21.9 million = City (30%)**
- **\$50.5 million = MCA (70%)**
- **\$72.4 million TOTAL**

Economic Development
MCA Cumulative Financial Resource Leverage
\$51 million



Medical Center of the Americas Campus

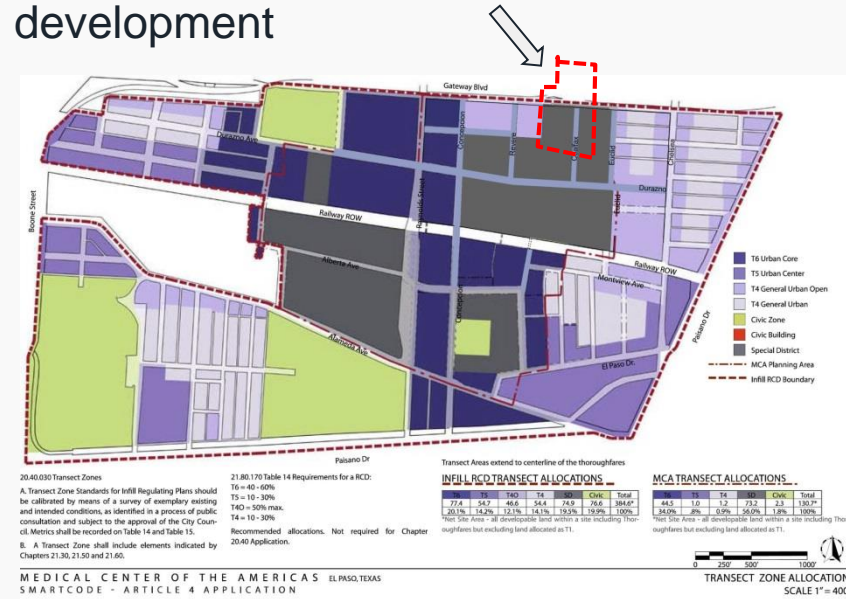


2008:
140 Acre Master Plan



2011:
440 Acre Master Plan

2011: SmartCode Re-Zoning....
.... And 13 acre purchase for "Tech Park" development



2011: Tax Increment Reinvestment Zone #6
2016: Incentive Map

Cardwell Collaborative



- Completed in June 2016
- LEED Silver Certified
- 60,000 sf – offices, wet & dry labs, meeting/collaboration spaces
- Shared lab equipment
- Laboratory safety program
- 20+ start-ups



South-Central VA Wellness Center



- \$16 million project
- 33,000 GSF - ~24,000 USF
- Ground breaking Ceremony = August 15, 2018
- Construction Start = September 2018
- Anticipated Ribbon Cutting = October 2019



Growing a Culture of Innovation in the Desert:

evolution from 2000 to 2017

Beginning Efforts

MCA Foundation Formed
ETF / RCIC

SpaAce ●●●●

Business Plan Competition w/ 10 NASA innovations:

- 44 teams accepted (18 regional)
- 10 winners (4 regional + 1 runner up)
- 3 companies starting in the region

'00

'06

'13

'15

'17

Desert

Same ~5 tech companies in region
(e.g., Spira, Secure Origins)



RedSky Accelerator

Offered: \$20,000 POC grants +
office space + accelerator training

Results: 5 applicants; none worth
funding → program cancelled



Proof-of-Concept Challenge

See next slide.....



Innovation Center



• Cohort 1 Early Successes:

- 11 start-ups launched their companies
- Developed prototypes
- Raised investments
- Closed sales contract & grown revenues
- Launched pilot sites & grown user bases
- Gained entrance to internationally recognized accelerators

Innovation Center Proof-of-Concept Cos

SOFTWARE LABORATORY



BASEMATE

Origin: Minerva Genetics

Technology: genomic analysis web-based software



ACTIVE COMPANY

Origin: Silicon Valley

Technology: employer wellness software



SUPER HERO THERAPY

Origin: TTUHSC

Technology: software/animation to support child therapy

ENGINEERING LABORATORY



SUNCITY SMART TECH

Origin: Space Race: UTEP/NASA

Technology: wire fault detection and re-routing for military vehicles



STAR INNOVATIONS

Origin: UTEP

Technology: biocompatible piezoelectric energy for harvesting medical applications



DTEN MEDICAL

Origin: Las Palmas

Technology: diabetes care device



MINUS TAU

Origin: Space Race (TTUHSC/UTEP/NASA)

Technology: impact sensor system with impact location (helmets)

WET LABORATORY



MIPTEK

Origin: UTEP

Technology: molecular imprinted based analyte detection platform



VemiDoc

Origin: Private MD practice

Technology: telemedicine and market platform



ATLAS REGENERATION TECH

Origin: UTEP

Technology: water hardness sensor



MICROBIOCHIP DIAGNOSTICS

Origin: UTEP

Technology: paper/polymer hybrid microfluidic lab-on-chip, disease diagnosis



Demo Day 2018

THE MEDICAL CENTER OF THE AMERICAS FOUNDATION INVITES YOU TO STARTUP DEMO DAY:
CELEBRATING INNOVATION AND ENTREPRENEURSHIP

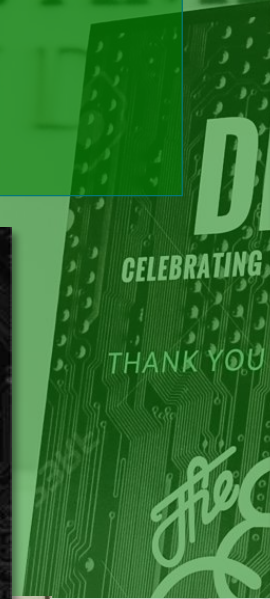
DEMO DAY 06.29.18
SHOWCASING PITCHES AND COMPANIES FROM THE 1ST COHORT OF THE MCA'S PROOF-OF-CONCEPT COMPETITION
FOOD AND REFRESHMENTS PROVIDED

3PM | START-UP PITCHES
4PM | CARDWELL COLLABORATIVE 2ND ANNIVERSARY PARTY

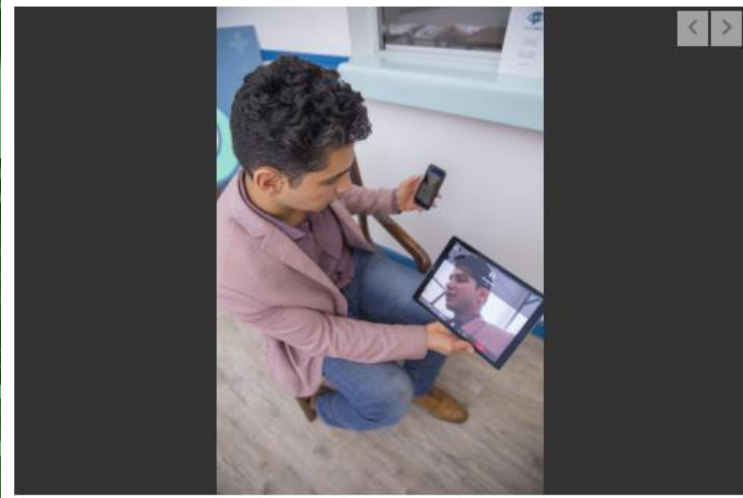
OPEN TO THE PUBLIC
RSVP AT MCAAMERICAS.ORG

The Electric Company
El Paso Electric

MEDICAL CENTER OF THE AMERICAS FOUNDATION



EDITOR'S PICK
1st startups graduate business 'boot camp'
By David Crowder / El Paso Inc. staff writer / Jul 9, 2018 (0)



Dr. Aldo Maspons, a pediatric gastroenterologist, has developed a telemedicine app for smartphones and tablet computers that takes telemedicine to a new level.
Photo by Jorge Salgado

f t e b q

What started nine months ago as a startup business competition ended with a day of pitches from nine teams that got to show their stuff.

The Medical Center of the Americas Foundation's "proof-of-concept" competition was a first-time experiment – part of a broader effort by city leaders to create more high-skill, high-wage jobs by cultivating budding startup tech companies in the region.

For months, entrepreneurs sharpened their business plans and honed their pitches in the high-tech Cardwell Collaborative building in Central El Paso. They received a little funding and help from mentors.



Cohort 2.... Continued success



Innovator / Entrepreneur & Start-Up Programs

- 35 applicants
- 60% healthcare
- 20% female
- More robust training + Live Plan
- More mentors
- More investors

Clinical Trials Consortium



The **mission** of the MCA's Clinical Trial Consortium (CTC) is to expand and accelerate our region's infrastructure and competitiveness in clinical research and innovation.

30+ key industry stakeholders from the **US and Mexico**

Goals:

- Improve health of individuals in our region
- **Improve regional access to healthcare innovators**
- **Lead in the development of new medicines, medical devices/diagnostics**
- **Expand the region's attractiveness for biomedical research**
- Facilitate clinical trial innovation, operational excellence & collaboration
- Advance niche areas matching our region's core capabilities and health disparities

Objectives:

- Map our region's clinical trial infrastructure & identify gaps
- Develop a 3-year strategic plan & implement key initiatives
- Promote the region's clinical trial industry locally and globally



BIO El Paso-Juarez, Inc. – 501(c)6

- **Formal Launch = Fall 2018**
- **Ecosystem Mapping & Remediation**
- **Conferences & Publications (BIO International; MedTech)**





**KEEP
CALM
AND
INVEST IN
THE FUTURE**



Thank You!
Questions?

